

## Abstract

A method for processing overheads in an optical communication system and a signal processing device are disclosed. The method includes: in a receiving direction, conduct an O/E and S/P conversion for the received optical signal, extract overheads necessary for overheads processing; transmit the overheads in serial; conduct an S/P conversion of the overheads, add fixed reserved overheads, and revert the parallel overheads for overheads processing; in a transmitting direction, generate parallel overheads, extract overheads necessary for overheads processing; transmit the overheads in serial; conduct an S/P conversion of the overheads, revert the overheads, synthesize the overheads with the payload data before the P/S and E/O conversion, and generate and transmit the optical signal. In accordance with the method and device of this invention, a serial bus is employed to transmit overheads, which reduces the number of buses on the motherboard and lowers the complexity of system design.